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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: Paul Rudolf

Docket Number: 121306.00002

Serial No.: 10/648,855

Art Unit: 2121

Filed: August 26, 2003

Examiner: unknown

For: ASSOCIATIVE MEMORY DEVICE AND METHOD BASED ON WAVE PROPAGATION

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

EXPRESS MAIL NO. EV 442379832 US

DATE OF DEPOSIT: September 2, 2004

Dear Sir:

Herewith is Form PTO-1449 together with one copy of each document listed thereon. Please note also any item(s) designated below:

The fee set forth in 37CFR 1.17(p) \_\_\_\_\_ is enclosed \_\_\_\_\_ may be charged to Deposit Account Number 20-0668.

Each document listed on enclosed Form PTO-1449 was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this correspondence.

Respectfully submitted,

Michael G. Cameron  
Reg. No. 50,298

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2435 N. Central Expressway, Suite 600  
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972-744-2934

IDS - 08/26/2003

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Substitute for form 1449A/PTO		Complete if Known	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>		Application Number	
		Filing Date	
		First Named Inventor	Paul Rudolf
		Group Art Unit	
		Examiner Name	
(use as many sheets as necessary)			
Sheet	1	of	5
		Attorney Docket Number	121306.00002

## **U.S. PATENT DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
JH		US-5,515,477	05/7/1996	J.G. Sutherland	
		US-4,974,202	11/27/1990	N. Mukohzaka	
		US-5,526,298	06/11/1996	N. Mukohzaka	
		US-4,701,879	10/20/1987	R.W.A. Scarf	
		US-5,568,416	10/22/1996	Kawana, et al.	
		US-5,485,418	01/16/1998	T. Hiraki and M. Hata	
		US-5,933,363	08/3/1999	T. Shindo	
		US-5,619,718	04/8/1997	N. Correa	
		US-5,483,480	01/9/1998	M. Yoneda	
		US-6,125,426	09/28/2000	M. Yoneda, et al.	
		US-5,740,274	04/14/1998	J. Ono and A. Osawa	
		US-5,699,449	12/18/1997	B. Javidi	
		US-5,524,177	06/4/1998	T. Suzuoka	
		US-6,067,536	05/23/2000	M. Maruyama, et al.	
		US-5,511,134	04/23/1998	Y. Kuratomi and H. Ogawa	
		US-6,272,241 B1	08/7/2001	G.D. Tattersall	
		US-6,332,137 B1	12/18/2001	T. Horl, et al.	
		US-6,192,351 B1	02/20/2001	K.C. Persaud	
		US-5,857,030	01/5/1999	R.S. Gaborski, et al.	
JH		US-5,696,838	12/9/1997	C.Chiu, et al.	

## FOREIGN PATENT DOCUMENTS

Examiner Signature	/Joseph Hirl/ (04/27/2006)	Date Considered
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<sup>3</sup> Applicant's unique citation designation number (optional). See RINUS Codes of USPTO Patent Documents at <http://www.uspto.gov> or WO EP 301-004.  
<sup>4</sup> Enter date that issued the document, by the two-letter code (WIPO Standard ST.3).<sup>5</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.<sup>6</sup> Kind of language by the appropriate symbols as indicated on the document under WIPO Standard ST. 18 if possible.<sup>7</sup> Applicant is to place a check mark here if English language Translation is attached.

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JH		US-5,895,652	11/30/1999	C.Chiu, et al.	
		US-6,038,338	03/14/2000	C.T. Nguyen	
		US-5,615,112	03/25/1997	O. R. Liu Sheng, et al.	
		US-5,819,007	10/6/1998	Z.F. Elghazzawi	
		US-5,824,052	07/13/1999	R. Palm	
		US-5,974,350	10/26/1999	L.I. Davis, Jr. et al.	
		US-6,094,648	07/25/2000	T.A. Runkler and J.C. Bezdek	
		US-5,893,085	04/6/1999	R.W. Phillips and J. L. Nettles	
		US-6,012,640	01/11/2000	L. Liu	
		US-6,272,476 B1	08/7/2001	B. Shi and G. Lin	
		US-5,748,852	05/5/1998	R.P.S. Mahler	
		US-6,337,928 B2	01/8/2002	K. Takahashi	
		US-5,757,287	05/26/1998	T. Kitamura, et al.	
		US-5,579,411	11/26/1998	G. Shou, et al.	
		US-5,871,292	09/23/1997	Y. Lee and N.S. Moon	
		US-6,078,884	08/20/2000	S.N. Downey	
		US-6,195,638	02/27/2001	G. Ilan and J. Goldberger	
		US-5,801,244	05/4/1999	M. Souma and K. Nagao	
		US-6,081,620	08/27/2000	E.J. Anderholm	
TH		US-6,278,798 B1	08/21/2001	K.G. Rao	

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J.H.	US-6,069,698		05/30/2000	A.M. McQueen, et al.
	US-6,311,173B1		10/30/2001	B. Levin, et al.
	US-6,327,581B1		12/4/2001	J.C. Platt
	US-5,659,626		08/19/1997	J.R. Ol, et al.
	US-5,789,098		08/25/1998	J.R. Ort, et al.
	US-5,926,555		07/20/1999	J.R. Ort, et al.
	US-5,995,641		11/30/1999	M. Yamaguchi
	US-5,420,937		05/30/1995	P.S. Davis
	US-5,960,101		09/28/1999	Z.P.P. Lo and B. Bavarian
	US-5,869,822		02/09/1999	D.L. Meadows II and A.J. Pouratian
	US-6,212,290B1		04/03/2001	P.C. Gagne and C.M. Puterko
	US-6,108,437		08/22/2000	S.H. Lin
	US-5,802,208		09/1/1998	C.I. Podlchuk and X. Zhang
	US-5,699,449		12/16/1997	B. Javidi
	US-RE36,041		01/12/1999	M. Turk and A.P. Pentland
	US-6,292,575B1		09/18/2001	J.F. Bortolussi, et al.
	US-6,301,370B1		10/9/2001	J.B. Steffens, et al.
	US-6,118,889		09/12/2000	A. Izuno, et al.
	US-4,495,644		01/22/1985	J.R. Parks, et al.
J.H.	US-5,109,426		04/28/1992	J.R. Parks

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				Group Art Unit	
				Examiner Name	
				Attorney Docket Number	121306.00002

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS					
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T <sup>2</sup>
JH		T. JOACHIMS, "Text Categorization with Support Vector Machines, Proceedings of European Conference on Machine Learning(ECML), 1998, 7 pps.			
JH		Y. LECUN, et al., "Comparison of Learning Algorithms for Handwritten Digit Recognition," Proceedings ICANN'95-International Conference on Artificial Neural Networks, Vol. II, pages 1-9. EC2, 1995.			
JH		S. PANKANTI, S. PRABHAKAR AND A.K. JAIN, "On the Individuality of Fingerprints," IEEE Transactions on Pattern Analysis and Machine Intelligence, Vol. 24, No. 8, August 2002 (in Press). 8 pps.			
JH		PAUL G. RUDOLF, et al., "Computer Modeling Wave Propagation with a Variation of the Helmholtz-Kirchhoff Relation", Applied Optics, Vol. 29 No. 7, 1 March 1990, 6 pps.			

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